

REMARKS

Applicants would initially like to thank the Examiner for the allowance of claims 17 and 18, indication of allowable subject matter in pending claims 11-14, and acknowledgment of Applicants' claim for foreign priority.

The Office Action rejects claim 9, 10, 12, 13, 15 and 16 under 35 U.S.C. § 103 as obvious over Zicker in view of Rappaport et al. ("Rappaport"). Applicants traverse the rejection.

The instant rejection is an exercise in *déjà vu*. Two Office Actions ago the Examiner rejected all claims as obvious over Tuohino in view of Rappaport. Then, as now, the Examiner conceded that the primary reference does not teach the claim 9 recitations of "suspending, in response to a control signal, forwarding incoming calls to the user," or "wherein said suspending forwarding incoming calls does not disconnect a call in progress between the user and the fixed network," and thus turns to Rappaport for these alleged teachings. In a prior response, Applicants pointed out how Rappaport did not teach or suggest these recited features. Although the Examiner initially did not accept the argument, the rejection was ultimately withdrawn. Rappaport now makes a surprise return, for the same improper grounds as its previous appearance.

The Examiner cites to Rappaport at the abstract, column 2 lines 24-44, and column 5 lines 7-51. Although not exactly the same citations as in the prior Office Action, the new collection of citations similar fails to teach or suggest the claimed subject matter. These sections recite:

The present invention is directed to a system and method that allows mobile platforms each supporting any of a variety of call types, and each having differing mobility characteristics, to maintain connectivity to a backbone network in spite of unreliable radio links that occasionally fail. It accomplishes this by using automatic and user-transparent reconnection attempts for appropriate call sessions when an interruption of the link occurs. The network may be supporting a variety of different call types simultaneously. Access to network connectivity resources can be provided according to call session priority based on (for example, call session type, platform mobility, hand-off status, and user class (fee-for-service)) criteria. The technology allows support of suspended sessions and uses repeated reconnection attempts with priority access to network

resources. It also provides for hand-offs of suspended sessions to neighboring gateways as mobile terminals move throughout the service area. In a network that uses this technology, for example, voice calls (typical of time-sensitive stream traffic) may preempt resources of time-insensitive data calls causing suspended sessions that do not result in session failures. Priority access for hand-offs of active sessions with respect to new call sessions can be accommodated. Mobile users that have some autonomy or who are perhaps exchanging time-insensitive data with a remote site can continue to function essentially undisturbed by link failures since the connectivity and reconnection procedures are managed by the network in a manner that is transparent to the end users. Mobile computing sessions and delay-insensitive data communications, for example, will be able to continue, largely unaware of link failures.

* * *

The present invention is directed to a system and method for controlling admission to a mobile communications system, which allows mobile platforms each supporting any of a variety of call types, and each having differing mobility characteristics, to maintain connectivity to a backbone network in spite of unreliable radio links that occasionally fail. The present invention employs an admission protocol that provides automatic and user-transparent reconnection attempts for appropriate call sessions when an interruption of the link occurs. Further, a network that employs an admission protocol of the present invention may support a variety of different call types simultaneously, wherein access to network connectivity resources can be provided according to call session priority based on (for example, call session type, platform mobility, hand-off status, and user class (fee-for-service)) criteria. The admission control protocol provides support of suspended sessions and uses repeated reconnection attempts with priority access to network resources, and provides for hand-offs of suspended sessions to neighboring gateways as mobile terminals move throughout the service area.

* * *

Thus, by implementing the techniques described herein, short term radio link disconnections, which are frequent in mobile communications, need not result in failed sessions, discarded information and wasted use of resources. The current invention concerns maintaining connectivity for sessions that have gained admission to network resources. It is applicable to both circuit switched and packet switched systems.

The issue of how to maintain connectivity of a mobile user to the network can be very important for implementation of new mobile wireless services. The present invention provides a system and method that attempts to maintain mobile user connectivity to the network by automatically and transparently attempting to reconnect disrupted links to mobile data users. For this purpose, we consider session-oriented communications and develop a tractable analytical

model for traffic performance based on multi-dimensional birth-death processes (as described in detail below). The approach allows consideration of various platform types, such as pedestrians, automobiles, and buses, which may have very different mobility characteristics and performance characteristics, such as blocking, forced session termination, carried traffic, the average time per suspension, and the average number of suspensions per session are computed based on the model.

With a session-oriented approach, a communication session is initiated, during which the user has access to network resources, although this access may be shared with others. Owing to the hostile mobile environment and user mobility, the user's connection to the network during a session may be severed. A session, which may be interrupted because of, e.g., failure of a hand-off attempt, is treated as a suspended session. Since the mobile user can act semi-autonomously, such disconnections can be transparent. That is, the mobile user can continue to function in an off-line mode while the system will begin transparent automatic reconnection attempts to reestablish a link to the network. Only after a fixed (given) number of such attempts to reconnect have failed, is the session deemed to have failed. Disconnection of a radio link does not cause the session to be cleared from the system until all reconnection efforts fail. Reconnection attempts for suspended sessions will be initiated while the mobile user application (operating at a higher protocol layer) continues.

Not one word in the above sections of Rappaport (nor in the previously identified sections of Rappaport) have anything to do with suspending an incoming call, nor failing to disconnect a call in progress when suspending incoming calls. All of the above disclosure is directed to maintaining an existing call in progress when the connection for the existing call is accidentally lost. Rappaport does not address or even consider suspending incoming calls, let alone in response to a control signal, or the relationship between an incoming call and a call in progress.

Just as Rappaport does not teach or suggest suspending incoming calls or a control signal, it does not teach or suggest the claim 9 language of “wherein said suspending forwarding incoming calls does not disconnect a call in progress between the user and the fixed network.” At best, Rappaport teaches that suspension of a connection of an existing call does not disconnect a call in progress. Rappaport does not teach or suggest that suspending forwarding incoming calls does not

disconnect a call.

These are of course the exact same points that Applicants made two responses ago. And in response to that argument, the Examiner stated in the subsequent advisory action:

Examiner respectfully disagrees. In Rappaport et al (Pat No. 6,477,373) teach suspending incoming call (C2, L29-58 teach suspended that call does not disconnect, and to make more clear C6, L10-32, teach sessions which means as current or call coming according suspending incoming call).

With all respect to the Examiner, the above rationale continues to be as inaccurate an observation. Column 2, lines 29-59 discuss an existing connection that is accidentally lost, not suspending incoming calls in response to a control signal while maintaining a call in progress. And “sessions” means the time that a connection is in place. Microsoft Press Computer Dictionary, 1992 at 314.

Accordingly the proposed combination of Zicker and Rappaport fails to teach every limitation of the rejected claims, and fails to provide suggestion or motivation to modify their teachings to meet these limitations. Withdrawal of the rejection and allowance of the same are therefore respectfully requested.

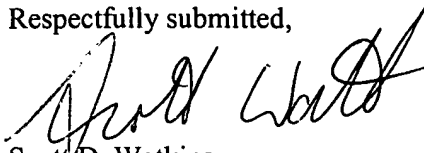
In view of the foregoing, the application is now believed to be in proper form for allowance, and a notice to that effect is earnestly solicited. To the extent that the Examiner disagrees, Applicants insist that the Examiner identify the individual words in Rappaport that teach the concepts of suspending incoming calls, control signals, and not disconnecting calls in progress in response to that control signal. This will, at the very least, frame the issues for proper consideration of the rejection on appeal.

If the Examiner believes that a telephone conference would be of value, he is requested to call the undersigned attorney at the number listed below.

The Commissioner is hereby authorized to charge/credit any fee deficiencies/overpayments
to Deposit Account No. 19-4293 (11696.4009).

Date: January 3, 2005

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Scott D. Watkins", written over a horizontal line.

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